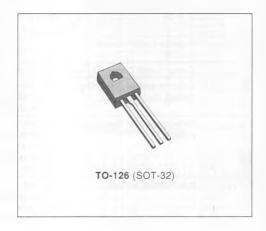


MEDIUM POWER DARLINGTONS

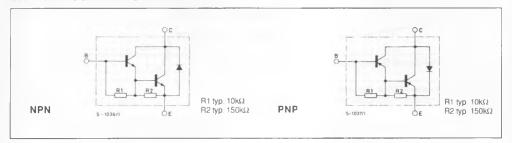
DESCRIPTION

The MJE800. MJE801, MJE802 and MJE803 are silicon epitaxial-base NPN power transistors in monolithic Darlington configuration and are mounted in Jedec TO-126 plastic package. They are intended for use in medium power linear and switching applications.

The complementary PNP types are the MJE700, MJE701, MJE702 and MJE703 respectively.



INTERNAL SCHEMATIC DIAGRAMS



ABSOLUTE MAXIMUM RATINGS

Symbol		Value	
	Parameter	MJE800/1 MJE802/3 MJE700/1 MJE702/3	
V _{CBO}	Collector-base Voltage (I _E = 0)	60 80	V
V _{CEO}	Collector-emitter Voltage (I _B = 0)	60 80	V
V _{EBO}	Emitter-base Voltage (I _C = 0)	5	V
1 _C	Collector Current	4	А
1 _B	Base Current	0.1	Α
Ptot	Total Power Dissipation at T _{case} ≤ 25°C	40	W
T _{stg}	Storage Temperature	- 65 to 150	°C
T,	Junction Temperature	150	°C

For PNP types voltage and current values are negative.

THERMAL DATA

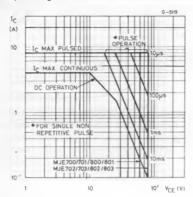
R _{th j-case}	Thermal Resistance Junction-case	Max	3.13	°C/W

ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise specified)

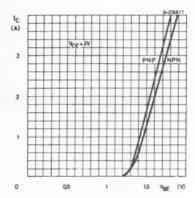
Symbol	Parameter	Test Conditions	Min.	Тур.	Max.	Unit
Ісво	Collector Cutoff Current (I _E = 0)	V _{CB} = rated V _{CBO} V _{CB} = rated V _{CBO} T _{case} = 100°C			100	μΑ
I _{CEO}	Collector Cutoff Current (I _B = 0)	V _{CE} = rated V _{CEO}			100	μА
I _{EBO}	Emitter Cutoff Current (I _C = 0)	V _{EB} = 5V			2	mA
V _{CEO(sus)} *	Collector-emitter Sustaining Voltage (I _B = 0)	I _C = 50mA for MJE800/1, MJE700/1 for MJE802/3, MJE702/3	60 80			V
V _{CE(sat)} *	Collector-emitter Saturation Voltage	I _C = 4A I _B = 40mA for MJE800/2, MJE700/2 I _C = 1.5A I _B = 30mA			3 2.5	V
		for MJE801/3, MJE701/3 I _C = 2A I _B = 40mA			2.8	V
V _{BE} *	Base-emitter Voltage	I _C = 4A V _{CE} = 3V for MJE800/1, MJE700/1			3	٧
		I _C = 1.5A V _{CE} = 3V for MJE801/3, MJE701/3			2.5	٧
		I _C = 2A V _{CE} = 3V			2.5	V
h _{FE} *	DC Current Gain	$f_C = 4A$ $V_{CE} = 3V$ for MJE800/2, MJE700/2	100			
		$I_C = 1.5A$ $V_{CE} = 3V$ for MJE801/3, MJE701/3	750			
		I _C = 2A V _{CE} = 3V	750			
h _{fe}	Small Signal Current Gain	I _C = 1.5A V _{CE} = 3V f = 1MHz	1			

^{*} Pulsed . pulse duration = $300\mu s$, duty cycle = 1.5%.

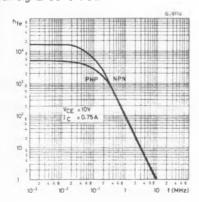
Safe Operating Areas.



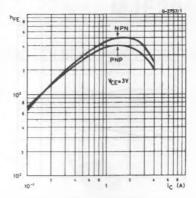
DC Transconductance.



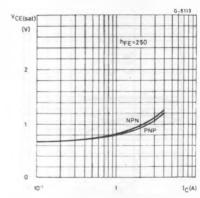
Small Signal Current Gain.



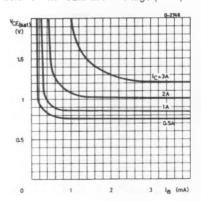
DCCurrent Gain.



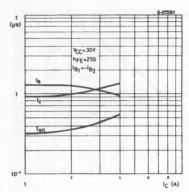
Collector-emitter Saturation Voltage.



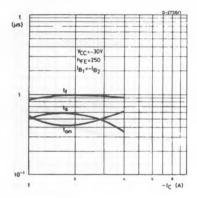
Collector-emitter Saturation Voltage (NPN).



Saturated Switching Characteristics (NPN).



Collector-emitter Saturation Voltage (PNP).



Collector-emitter Saturation Voltage (PNP).

